Technical Data

2-Ch Receiver		4-Ch Transmitter	
dimensions:	68x55x25 mm	features:	4-buttons activity LED
input power:	9-12V~(AC) 12-15V= (DC) @ 60mA max.	dimensions:	30x58x12 mm
		RF-frequency:	433MHz < 10mW ERP (as req. CE / R&TTE)
contact rating:	250VAC / 5A		
allowed temp.:	0°C .... 40°C		
RF frequency:	433 MHz	battery:	Type 27A (12V Alkaline)

Disposal after end of using life for this product

Batteries and electronic devices of all kinds must not be disposed thru regular household waste disposal but should be turned in to a collection point for proper recycling. Please check with your local requirements.

Limited Warranty

This product was designed and manufactured with great care and comes with a warranty against material or manufacturing defects at time of purchase. This warranty is valid for 24 months starting with the day of purchase and can be claimed with original sales receipt. The warraty of TowiTek is limited to cost free repairing or replacement of the defective unit. Expenses and risk of transportation; compensation for installation and de-installation and all other expenses which may be related to the repair or exchange of this product are not refunded by TowiTek. The liability for consequential damages resulting from the use of this product – no matter of which exact kind – is generally ruled out.

TowiTek 433MHz radio receiver set

Nr. 19 12 40

User Guide

www.conrad.com

Thank you for purchasing this product of TowiTek!
This user guide contains many important instructions on safe and proper use of this product. The purpose of this user guide is to make sure you always will get best performance andan reliable operation of your new product.

PLEASE FULLY READ THIS USER GUIDE!

The handling of products operating with electric current requires you to follow the rules from VDE such as VDE 0100, VDE0550/0551, VDE 0700, VDE 0711 and VDE 0860 or other local rules in your country.

- TowiTek modules are not designed and authorized for use in life support or life saving applications! Do not use the product for applications in which a temporary or permanent failure or malfunction could cause damage to persons or propery.
- If the module is used to switch currents greater 24V it is necessary to have the installation done with no voltage applied and performed by a trained professional authorized for such work. The module may only be used in such application if it was installed in a safe to touch enclosure.
- The module must only be used in dry and clean environment. The use near water, heavy dirt and/or high humidity is dangerous and not permitted.
- The product must not be used in conjunction with any type of flammable liquid or gas or other environment with risk of spark triggered explosions.
- Never exceed the limits or ratings listed in the 'Technical Data' section at the end of this user guide.
- If the module is used in schools or educational facilities or similar institutions the operation must be supervised by trained and authorized staff.
- The product itself and all parts thereof (including packing material) are not suitable toys for childern! (choking hazard, risk of electric shock, ...)

Intended use for this product

The TowiTek 2-Ch radio receiver set is intended for use in wide range of remote switching and controlling functions. Possible applications include garage door, gates, lighting and many others. The output switch contacts are suitable to handle mains voltage.

Features of the 2-Ch receiver

- 2-Ch receiver with two separate relay outputs
- one handheld transmitter included with the set
- up to 50 transmitter codes can be learned
- toggle or time mode can be individually configured for each of the two channels
- built in antenna – range up to 50m with direct line of sight and no interference with other RF-noise
- supply voltage 12-15V DC or 9-12V AC (@ 60mA)
- simple programming and configuration with single button

Features of the handheld transmitter

- compact size dimensions of just 58 x 30 x 12 mm
- 4 buttons with tactile feedback
- blue LED for showing transmitting activity
- battery 12V Typ '27A' (included, already preinstalled)
- 48-bit security code
- compliant with CE and R&TTE requirements (433MHz, <10mW ERP) for use within EU countries

Operating Instructions

The handheld transmitters will send a unique digital code for each of the 4 buttons pressed. Each receiver could learn up to 50 such codes and associate them with one the two control channels. The assignment between buttons on the transmitter and channel on the receiver can be freely choosen. It is possible to use the same transmitter with several receivers.

Learning new transmitter codes

With short pressing of the programming key on the receiver the 'learning mode' is entered:

programming key	LED	function
press short	Ch 1 LED blinking	Learning codes for Ch1
press short again	Ch 2 LED blinking	Learning codes for Ch2
press short again	LEDs off	exit learning mode

In learning mode the receiver is waiting for codes received from transmitters. If no code is received for about 10 seconds, the receiver will exit learning mode and return to normal operation mode. If a code is received during learning mode, it is stored to memory and both LEDs will flash for confirmation.

Configuration of the two channels for toggle or timer mode

By keeping the programming button pressed for longer duration the configuration mode can be selected according to this procedure:

first step: choose channel

press programming key and...	LED-Anzeige	Funktion
release, after...	Ch1 LED is lit	setup mode for Ch1
release, after...	Ch2 LED is lit	setup mode for Ch2

Functions in normal operation mode

After learning codes from transmitters, both channels of the receiver can be controlled independent of each other according to the configured operation modes.

The yellow LED for Ch1 / Ch1 indicate the current status of the associated relay.

If the LED is lit, the terminals 'NO' and 'C' of this channel are connected electrically.

If the LED is dark, the terminals 'NC' and 'C' of this channel are connected electrically.

The 3-pin terminal block on the left is for Ch1, the terminal block right of it is for Ch2

PLEASE DO NOT EXCEED THE MAXIMUM VOLTAGE OR CURRENT RATING FOR THE RELAY CONTACTS

Note about maximum range to be obtained:

The functional range is up to 50 meters under best conditions but could be limited by objects blocking the line of sight between transmitter and receiver. Other RF-noise on the same frequency (e.g. from babyphone, wireless thermometer, or other 433MHz devices) could also limit the effective range of the remote set.

Mounting instructions

The 2-ch remote receiver could be mounted on almost any even surface, mounting on metal may have bad effect on functional range.

Using the included mounting clips, the case can be snapped onto DIN-mounting rails with 30mm width

second step: choose desired mode

The mode of operation can be choosen individually for both channesl. While the LED of Ch1 or Ch2 is still lit from first step the programming key is pressed again, and...

programming key	LED	function
pressed again, and ...	slow blink sequence	choosing mode
... release after 1st blink		toggle mode
... release after 2nd blink		0,5 sec. timer
... release after 3rd blink		5 sec. timer
... release after 4th blink		30 sec. timer
... release after 5th blink		1 min. timer
... release after 6th blink		5 min. timer
... release after 7th blink		15 min. timer
... release after 8h blink		30 min. timer
... release after 9th blink		1 hour timer

Delete all transmitter codes from memory

For deleting all codes stored in the memory of the receiver the programming key is held down until both LEDs are lit together (after 3-4 seconds). The key is released and pressed again to confirm the deletion of the complete memory.

The completion of the memory formatting is confirmed with alternate blinking of both LEDs

The setting of the toggle/timer mode for both channels is not affected by this procedure.

EU-Declaration of conformity

The company

TowiTek GmbH
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81825 München

declairs in their own responsibility that the product

2-Ch rf-receiver model **RFC10**
and
4-Ch handheld transmitter

comply with

R&TTE direktive 1995/5/EC

and

EMC (art. 3.1.b) : ETS 300 683 / 1995 (EN55022)
(art. 3.2) 1-ETS 300-220

The above named company keeps records
with confirm the compliance to the standards

Tobias Wieler Munich, 11th of May 2007